

## REMARKS

Reconsideration of this application as amended, is respectfully requested.

## **I. Status of the Claims**

Claim 9 has been added and does not add new matter. Support for the claim is found on page 16, lines 6-13 of the Specification and Figure 7 of the drawings.

Claims 3, 4 and 7-9 are pending in the application.

Claim 7 has been amended. The amendment does not add new matter.

## II. Telephone Interview

Applicants would like to thank Examiner Snider for all of the courtesies extended in the telephone interview held on September 26, 2003 to Louis DelJuidice. The claims and the Oka reference, cited below, were discussed and the Examiner stated that the amendments herein may overcome Oka. However, the Examiner further referenced U.S. Patent Nos. 6,010,561 to Dyson and 6,591,446 to Bair et al. (not currently of record) as disclosing vacuum cleaners having filters in an exhaust path. A discussion of these references is provided below.

### III. Rejections Under 35 U.S.C. § 103(a)

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,324,722 to Takemoto in view of U.S. Patent No. 4,393,536 to Tapp, and in further view of U.S. Patent 6,032,327 to Oka et al.

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The Examiner states that Takemoto discloses a similar vacuum cleaner however does not disclose an agitator motor. The Examiner states that Tapp teaches a rotary brush and an agitator motor in the suction tool for rotating the brush. The Examiner states that Oka teaches a filter, located outside the dust collecting chamber, in the exhaust path. The Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the motor of Tapp and the exhaust filter of Oka in Takemoto. Applicants respectfully traverse the above rejection.

Applicants have amended claim 7 to specify, “an air filter in said exhaust path wherein said air filter is disposed externally to said dust collecting chamber and located upstream of an exterior air discharge part in the vacuum cleaner body.” Applicants respectfully submit that Oka does not disclose or suggest this element of claim 7 because Oka’s air filter is housed downstream from air outlet slits 11c. Oka teaches “Part of the slip stream is discharged out of the cleaner body 1 through the outlet slits 11c. The remainder of the stream flows through the discharge-side hose 7, the discharge-side connecting pipe 35, ... , and jets to the outside of the rotating brush 5” (Oka; column 9, lines 26-33). Oka’s filter 7b is fitted at end 7a of the discharge-side hose 7 (Oka; column 6, lines 58-60). Oka does not teach or suggest placing an air filter upstream of the air outlet slits for filtering exhaust air from the motorized fan to ensure that exhaust air exiting through the slits 11c is clean air. This prevents dust particles from being exhausted into the surrounding environment and/or onto the floor through the slits. The present invention is a significant improvement over Oka. Applicants submit that Claim 7, as amended, requires that the air filter be located upstream of an exterior air discharge part in

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Claims 3 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takemoto in view of Tapp, and in further view of United Kingdom Published Patent Application No. GB2292882 to Benjamin Edginton et al. (hereinafter “GB ‘882”). The Examiner admits that Takemoto and Tapp do not teach directing of the exhaust air onto the brush but states that GB ‘882 discloses directing exhaust air onto a rotating brush. The Examiner then states that it would have been obvious to one of ordinary skill in the art to allow for the most effective suctioning of dirt from a surface in Takemoto in view of Tapp and GB ‘882.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable for obviousness over Takemoto in view of Tapp in view of GB '882, and further in view of Canadian Patent No. CA972510 to Loetkeman (hereinafter "CA '510"). The Examiner admits that the combination of Takemoto, Tapp and GB '882 does not disclose a pivoting pipe but states that CA '510 discloses a vacuum cleaner having an exhaust path which uses a pivoting pipe. The Examiner states that it would have been obvious to one of ordinary skill in the art to

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allow for ease in maneuvering the floor suction tool to various locations in Takemoto in view of Tapp, GB '882 and CA '510. The Examiner also states that it would have been obvious to one of ordinary skill in the art to have slack in the wires in the vicinity of the pivoting pipe in Takemoto in view of Tapp, GB '882 and CA '510 to ensure that the pivoting would not cause the motor wires to become disconnected during use.

Applicants respectfully submit that claim 4 depends from amended claim 7. Thus, the argument above, regarding locating the air filter upstream of the exterior air discharge part, pertains to this rejection. Additionally, CA '510 does not teach or disclose the elements lacking in Takemoto and present in the claims. Applicants respectfully request withdrawal of this rejection.

Regarding claim 7, the Examiner suggested in the telephone interview of September 26, 2003 that U.S. Patent No. 6,010,561 to Dyson discloses a vacuum cleaner having a filter in an exhaust path. Applicants respectfully submit that Dyson does not disclose or suggest the present invention because Dyson's filters are connected together so as to form a single filter assembly. Dyson teaches connecting the downstream filter 14 to the upstream filter 12. One of ordinary skill in the art is not taught or motivated to apply Dyson's filter assembly to a vacuum cleaner that already has a filtering means upstream of the fan unit as is the case in the present invention, i.e., paper pack filter 4 (*see*, Specification page 14, line 20 and Figure 1). One of ordinary skill is only taught and motivated to connect first and second filters together to encourage the user of the vacuum cleaner to regularly maintain both filters. Applicants respectfully submit that the present invention includes paper pack filter 4 upstream of the fan

unit for filtering the dust contained in the suction air and paper pack filter 4 is not attached to filter 13. Applying Dyson's filters to the vacuum cleaner of the present invention will result in placing a third filter upstream of the fan unit or attaching paper pack filter 4 to filter 13. Thus, one of ordinary skill in the art is not motivated to combine Dyson with the prior art references to achieve the presently claimed invention.

Further in the interview, the Examiner stated that U.S. Patent No. to Bair et al. (hereinafter "Bair") discloses a vacuum cleaner having a filter in an exhaust path. Applicants respectfully submit that Bair does not disclose or suggest the present invention because Bair's filter is not equipped for use in a circulating vacuum cleaner. Bair's filter arrangement is for use with a cyclonic vacuum. Cyclonic vacuums do not have bag filters, but rather utilize cyclonic air flow to separate the majority of the dirt and other particles from the suction air stream, and thus require additional forms of filtration to remove residual particles returned to the motor and exhausted. Additionally, to prevent restricting air flow which decreases the effectiveness of the cyclonic action, filters for use with cyclonic vacuums must be particularly developed and/or altered for use with cyclone airflow. This issue is highlighted by Bair,

In some cyclonic air flow vacuum cleaners, the exhaust air is not free of residual contaminants. Because the cyclonic action of such conventional cyclonic vacuum cleaners does not completely remove all dust, dirt and other contaminants from the suction air stream, it is necessary to include a filter downstream from the cyclonic chamber. However, the conventional filter elements so used have caused considerable difficulty. A conventional filter which is sufficiently fine to filter the air stream effectively, unduly restricts air flow and decreases the effectiveness of the cyclonic action. On the other hand, a coarse filter does not effectively filter the air stream of residual contaminants. Furthermore, conventional filter media, such as paper or fibrous media, has been found to clog readily thereby unduly decreasing air flow rates over time.

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Bair, column 1, lines 48-55

Thus, one of ordinary skill in the art is not taught or motivated to combine Bair's filter arrangement from a cyclonic vacuum with a circulating vacuum cleaner because Bair does not re-circulate his air flow. Bair's exhaust is discharged to the atmosphere so one of ordinary skill in the art would not look to a non-circulating vacuum to filter re-circulating air.


### CONCLUSION

In view of the above amendments and remarks, it is believed that claims 3, 4 and 7-9 are in condition for allowance and it is respectfully requested that the application be reconsidered and that all pending claims 3, 4 and 7-9 be allowed and the case passed to issue.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Dated: January 8, 2004

Respectfully submitted,

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